

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: EDWARDS et al.

Application: METHOD, COMPILER AND PLATFORM INDEPENDENT FRAMEWORK  
FOR PARSING AND GENERATING DATA STRUCTURES

Serial No.: 09/829,834

Filing Date: April 10, 2001

Art Unit: 2124

Examiner: Trenton J. Roche

Case: ROC920010078US1

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**RESPONSE TO NOTIFICATION OF NON-COMPLIANCE**

**APPEAL BRIEF TRANSMITTAL**

Sir:

11/30/2006 MBIZUNES 00000022 090465 09829034  
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Responsive to the Notification of Non-compliance with the Requirements  
of 37 CFR 41.37 mailed November 2, 2006, a corrected Appeal Brief for Applicants is  
submitted with the Appendix including the drawings removed, the Summary of Claimed

Serial No.: 09/829,834

Subject Matter more concisely rewritten, and to add the citation at previous page 32  
requested by the Examiner.

The Commissioner of Patents and Trademarks is hereby authorized to  
charge any additional fees or credit any overpayment in connection with the filing of the  
above-referred to Appeal Brief to the Deposit Account No. 09-0465 of International  
Business Machine Corporation. A duplicate copy of this transmittal is enclosed.

Respectfully submitted,

By   
\_\_\_\_\_  
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One of the Attorneys for Applicants

Enclosures



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APPEAL BRIEF FOR APPLICANTS

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One of the Attorneys for Applicants



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**APPEAL BRIEF FOR APPLICANTS**

Sir:

This is an appeal of the final rejection of claims 1 and 10-14 under 35 U.S.C. §102(b) and claims 2-9 under §103(a) mailed November 1, 2005. For the reasons set forth below, it is submitted that the Board should reverse the final rejection of claims 1-14.

**(1) REAL PARTY IN INTEREST**

The real party of interest is International Business Machines Corporation.

**(2) RELATED APPEALS AND INTERFERENCES**

Applicants' attorney knows of no other appeals or interferences that would have a bearing on the Board's decision in the present appeal.

**(3) STATUS OF CLAIMS**

Claims 1 and 10-14 have been finally rejected under 35 U.S.C. § 102(b) and claims 2-9 have been finally rejected under as unpatentable under 35 U.S.C. § 103(a) in an office action mailed November 1, 2005. The rejections of each of the pending claims 1-14 have been appealed.

**(4) STATUS OF AMENDMENTS**

A response was filed on December 30, 2005 after the final rejection of claims and will be entered for purposes of appeal.

**(5) SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed invention as recited by independent claims 1, 10, and 14, and representative dependant claims 2, 5, and 7 can best be appreciated and understood with reference to the patent specification (hereinafter page p., line l.) and drawings of the invention. The present invention effectively implements a method, compiler and platform independent framework for parsing and generating data structures. Central processor unit 102 is suitably programmed for generating data structures and information to manipulate the data, such as illustrated and described with respect to FIGS. 3-8 and 10-13 and to execute the flowchart of FIGS. 14A and 14B. Computer

100 may be implemented using any suitable computer, such as an IBM personal computer running the OS/2® operating system. (p. 5, l. 17-22).

Independent claim 1 recites a computer-implemented method for parsing and generating data structures for use by data processing applications in a computer system comprising the steps of:

utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; (p. 5, l. 23 - p.6, l.8)

and storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.. (p. 2, l. 17-21; p. 9, l.16-p. 11, l. 17 and FIG. 2C). See, for example, FIG. 4 that illustrates information 400 to manipulate the data generated by the compiler for the packed data structures 300 of FIG. 3. As shown, structure field prefd\_exclus has a sizeof() equal to 1 byte and an offsetof () equal to 0. Structure field vpci has a sizeof() equal to 2 bytes and an offsetof () equal to 1. Structure field vci has a sizeof() equal to 2 bytes and an offsetof () equal to 3. (p. 12, l. 1-7)

400

structure field 402	sizeof() 404	offsetof() 406
prefd_exclus	1	0
vpci	2	1
vci	2	3

FIG. 4

In accordance with features of the invention, the identifier structure is based on the definition of the data structure itself so that the problem of duplicating the data structure definition is eliminated. The sizeof and offsetof functions automatically account for compiler and platform differences which otherwise would lead to alignment problems so that compiler and platform independence from data structure realignment is provided. (p. 2, l. 22-27).

The method of independent claim 1 can be used by procedural table-driven or object oriented rules-driven approaches for generating and parsing data structures. A pair of functions, sizeof() and offsetof() functions are used. The sizeof() and offsetof() functions are built into the C and C++ programming languages. It should be understood that other languages have sizeof() and offsetof() functions or these functions can be built within the constraints of other languages. In accordance with features of the invention, instead of implementing a table or rule object as a redundant definition of the data structure, the length and location of each of the data structure's parameters are defined within the table or rule object by the sizeof() and offsetof() functions. Thus, the table or rule object is based on the definition of the data structure itself. This differs from treating the data structure purely as a string of bytes in that the offsetof() function provides the location of each parameter within the structure whereas a purely string implementation would only deal with the length of each parameter. Additionally, the sizeof() and offsetof() functions automatically account for compiler and platform differences which otherwise would lead to alignment problems. Since the sizeof() and offsetof() functions execute at compile time, no performance penalty

results. (p. 5, l. 23 - p.6, l.8).

Independent claim 10 recites a compiler and platform independent framework for parsing and generating data structures (212, FIG. 2D) used by data processing applications in a computer system (100, See FIGS. 1, 2A, p. 5, l. 2-22, p.6. l. 9-25) comprising:

means for defining a length and a location of each parameter of a data structure utilizing sizeof and offsetof functions; (See also, for example, FIG. 4 above and see also FIGS. 5-6, 7-8, 10-11, 12-13 and 14A-14B, p. 12, l. 8 - p. 12. l. 32, p. 13. l. 14 - p. 15, l. 10) and

means for storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures. (p. 2, l. 17-21; p. 9, l.16 - p. 11, l. 17 and FIG. 2C, FIG. 2D as follows).

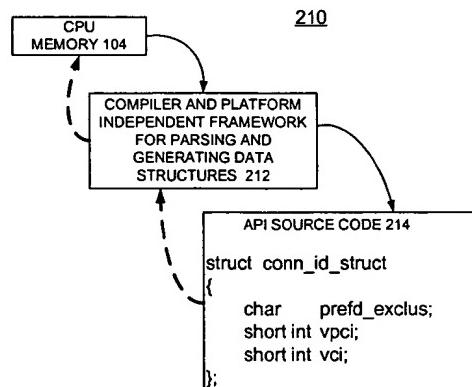


FIG. 2D

Independent claim 14 recites a computer program product for parsing and

generating data structures for use by data processing applications in a computer system, said computer system having a processor; a memory controller coupled to said processor by a system bus; a main memory coupled to said memory controller; said computer program product (See FIG.15, p. 15, l. 11-23) including a plurality of computer executable instructions stored on a computer readable medium, wherein said instructions, when executed by said computer system (See FIGS. 1, 2A, p. 5, l. 2-22, p.6. l. 9-25) cause said computer system to perform the steps of:

utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; (p. 2, l. 17-21, p. 5, l. 23 - p.6, l.8) and

storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures. (p. 2, l. 17-21; p. 9, l.16-p. 11, l. 17 and FIG. 2C).

Dependent claim 2 recites wherein the data structure is an ATM information element (IE) (See FIG. 2A illustrating exemplary software components of a user application 104B to utilize the ATM card communications adapter 120 in the computer system 100 of FIG. 1) and wherein the step of utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure includes the step of utilizing sizeof and offsetof functions, defining a length and a location of each data parameter of said ATM information element (IE). (See FIG. 2B below illustrating the format and content of connection information element (IE) 200 and also see FIG. 2C below illustrating AtmSvcConnIdleRules 202 for parsing and generating data structures

(p. 6, l. 26 - p. 7, l. 7). An object oriented rules approach is applied to parsing and generating the network-side IE and then the object oriented rule is extended to additionally parse and generate the user-side data structure. AtmSvcConnIdlRules 202 illustrate the method for parsing and generating data structures of the preferred embodiment is applied to one IE. The Connection Identifier IE 200 begins with a 4-byte header whose format is generic to all IEs. The next byte contains a 2-bit constant, VP Associated Signaling and a 3-bit parameter, Preferred/Exclusive. The next two bytes comprise the Virtual Path Connection Identifier (VPCI) parameter. The final two bytes comprise the Virtual Channel Identifier (VCI) parameter. The network layer software also passes these parameters across the user-side API. The following rule object for the Connection Identifier IE 200 and its corresponding constructor contain all of the information unique to this IE and thus is all of the code unique to parsing and formatting it. (p. 6, l. 30 - p. 7, l. 8-10).

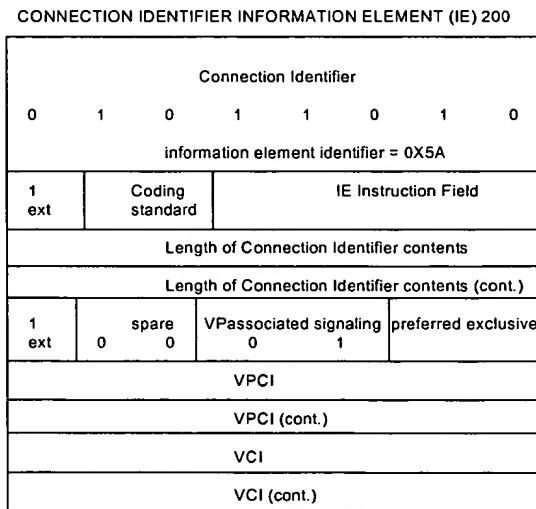


FIG. 2B

Claim 5 further defines the invention depending from claim 3 which recites that

ATM information element (IE) is a Connection Identifier IE (See FIGS. 2A, 2B described above) and wherein the step of utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure includes the step of utilizing sizeof and offsetof functions, defining a length and a location of each data parameter of said Connection Identifier IE; and claim 5 further recites the step of utilizing sizeof and offsetof functions, defining a length and a location of a virtual path connection identifier (VPCI) parameter. (See FIGS. 2B, 2C, p. 6, l. 26 - p. 7, l. 10).

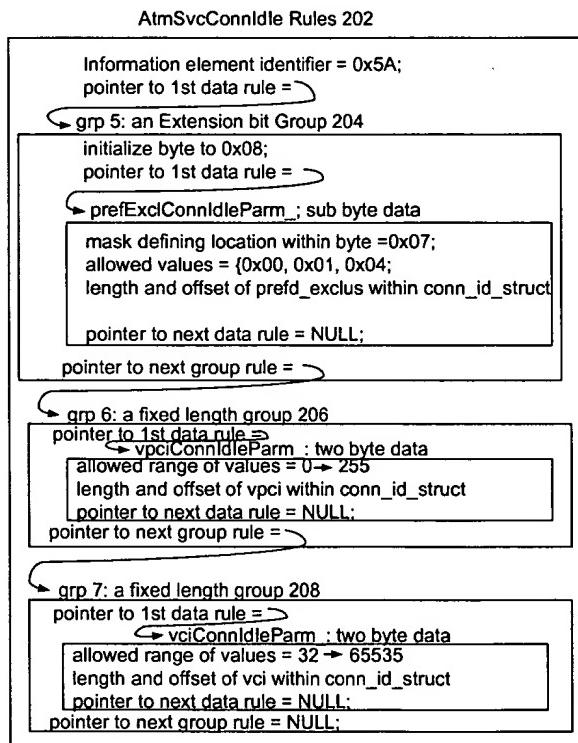


FIG. 2C

Claim 7 further defines the invention depending from claim 3 which recites that said ATM information element (IE) is a Connection Identifier IE (See FIG. 2B illustrating connection information element (IE) 200 and also see FIG. 2C illustrating

AtmSvcConnIdleRules 202 for parsing and generating data structures (p. 6, l. 26 - p. 7, l. 7). and wherein the step of utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure includes the step of utilizing sizeof and offsetof functions, defining a length and a location of each data parameter of said Connection Identifier IE, and from claim 4 which recites that said includes the step of utilizing sizeof and offsetof functions, defining a length and a location of a preferred/exclusive parameter (See FIGS. 2B, 2C, p. 6, l. 26 - p. 7, l. 10), and claim 7 further recites wherein the step of storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition includes the steps of storing said length and said location of said preferred/exclusive parameter in a preferred/exclusive parameter identifier object in said data structure definition. (See also, for example, FIG. 4 above and see also FIGS. 5-6, 7-8, 10-11, 12-13 and 14A-14B, p. 12, l. 8 - p. 12. l. 32, p. 13. l. 14 - p. 15, l. 10)

**(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The first ground of rejection presented for review is the rejection of claims 1 and 10-14 under 35 USC §102(b) as being anticipated by Adusumilli, U.S. patent 5,870,749.

The second ground of rejection presented for review is the rejection of claims 2-9 under 35 USC §103(a) as being unpatentable over Adusumilli, U.S. patent 5,870,749 in view of Sasagawa et al., U.S. patent 6,028,863.

**(7) ARGUMENT**

**A. INTRODUCTION**

The claims 1-14 on appeal do not all stand or fall together. The claims may conveniently be separately considered based upon the recited subject matter. The independent claims at issue here are claims 1, 10, and 14, and representative dependant claims 2, 5, and 7 are separately patentable.

Applicants respectfully submit that the Examiner's rejections under 35 USC §102(b) and under 35 U.S.C. § 103(a) should be reversed because the subject matter of each of independent claims 1, 10, and 14 and representative claims 2, 5, and 7 is patentable over all the references of record.

Further there is no teaching or suggestion in any of the cited references, individually or taken as a whole, to make the claimed invention obvious.

The rejections of the pending claims under 35 USC §102(b) and under 35 U.S.C. §103(a) are improper and should be reversed.

Applicants respectfully submit that each of the independent claims 1, 10, and 14, and representative dependant claims 2, 5, and 7, is clearly patentable over all the references of record including Adusumilli and Sasagawa et al.

Applicants respectfully submit that considering the subject matter as a whole of the claimed invention as recited in each of the independent claims 1, 10, and 14 requires a conclusion that all the claims 1-14 are patentable.

B. THE SCOPE AND CONTENT OF THE PRIOR ART

Adusumilli, U.S. patent 5,870,749

Adusumilli, U.S. patent 5,870,749 discloses a method for translating attribute data carried in Common Management Information Protocol (CMIP) Protocol Data Units (PDUs) to/from custom designed data structures. A supplementary method for incorporating user's preferences on the data structures and the relationships between different fields in these data structures and the corresponding attribute values is also provided. The translation method automatically performs conversions between the user-designed data structures and various CMIP requests/responses automatically, and, in accordance with user's preferences. The method allows users to simplify and/or compact the storage representation of the Managed Objects by taking advantage of application specific knowledge, and by eliminating unnecessary fields from CHOICE data types in the target data structures. Benefits of the methods presented in this disclosure include automatic translation of CMIP PDUs to/from user-designed data structures, ability to store Managed Object data in space-efficient manner, and automatic generation of data structures for use in communicating with devices using proprietary data representation. At column 11, lines 18-50 states:

"The MOClassTable shown in FIG. 4 contains an entry for each configured Managed Object Class. The localFormClassId field contains the local-form identifier (an integer value) specified using the LOCAL-ID clause of the CLASS configuration. This may be used internally in place of the object-identifier of the class. The CStructureName corresponds to the name of the C structure specified with the DATA-TYPE clause of the CLASS configuration. By

default the configuration program derives this name from the managed object class name (for example by adding a prefix and capitalizing the first letter of the class name). The user can set this to his/her own data structure name, if desired. The CStructureSize field contains the size of the C structure specified in the DATA-TYPE clause. This is only set in the translation tables (the sizeof() operator may be used to compute this size), and is not used in the configuration stage. The ClassInfoPointer field is used to store a link to the meta data generated by the GDMO compiler for this managed object class definition. The ClassAttributeTablePointer points to a class-specific attribute table that contains an entry for each attribute included in the ATTRIBUTES clause of the CLASS specification. The localFormAttributelD field of each ClassAttributeTable entry contains the local-form identifier value of the attribute. This value is copied from the corresponding entry in the GlobalAttributeTable at the time of generating translation tables or a new configuration file. The fieldName field is set to the field-name specified for this attribute in the ATTRIBUTES clause, or to the attribute-label if the field-name is omitted. The fieldOffset field is set to the offset of the corresponding field in the C structure associated with the managed object class. This field is set only in the translation tables (the offsetof() macro may be used to compute the offset of the field) and is not used in the configuration stage."

**Sasagawa et al., U.S. patent 6,028,863**

Sasagawa et al., U.S. patent 6,028,863 discloses a device at the terminal unit and a device at the network that support an interim local management (ILMI) protocol. When the power is applied to the device at the terminal unit, it notifies the device at the network of support range information about a VPI/VCI of the device at the terminal unit. The device at the network assigns a VPI/VCI to the device at the terminal unit according

to the support range information about the VPI/VCI received in a cold start trap message from the device at the terminal unit when a signal is received from the device at the terminal unit. FIG. 43 shows the data format for use in specifying the connection identifier contained in the signaling message used in the fifth preferred embodiment of the present invention. It shows the details of the element (14) of each message shown in FIGS. 29 through 31. In FIG. 43, the field "virtual path connection identifier" stores the VPCI (corresponding to the VPI), and the field "virtual channel identifier" stores the VCI. The invariable indication field "preferred/exclusive" stores a 3-bit value having one of the following meanings. 000: VPCI is invariable, and VCI is also invariable. 001: VPCI is invariable, but VCI is variable. 010: VPCI is variable, but VCI is invariable.

C. THE REJECTION OF CLAIMS 1 and 10-14 AS BEING ANTICIPATED BY

ADUSUMILLI SHOULD BE REVERSED

Anticipation is a question of fact. In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 (1984), it is only necessary for the claims to "read on' something disclosed in the reference, i.e., all limitations in the claim are found in the reference, or 'fully met' by it." Anticipation under § 102 can be found only when the reference discloses exactly what is claimed; where there are differences between the reference disclosure and the claim, the rejection must be based on § 103 which takes differences into account. Tyler

Refrigeration v. Kysor Industrial Corp., 777 F.2d 687, 689, 227 U.S.P.Q. 845 846-47

(Fed. Cir. 1985). It must be shown that the reference contains all of the elements of the claims, and that the elements are arranged in the same way to achieve the same result which is asserted to be an inventive function.

Claim 1 is patentable

Independent claim 1 recites a computer-implemented method for parsing and generating data structures for use by data processing applications in a computer system comprising the steps of: utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

Applicants respectfully submit that subject matter of the invention, as recited in independent claim 1, is not anticipated by Adusumilli. Only Applicants teach utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures. Adusumilli does not disclose, expressly or under principles of inherency, each and every element of a claimed invention as recited in claim 1. The rejection of claim 1 under 35 U.S.C. § 102(b) is improper and should be reversed.

In accordance with features of the invention, only Applicants teach instead of

implementing a table or rule object as a redundant definition of the data structure, the length and location of each of the data structure's parameters are defined within the table or rule object by the sizeof() and offsetof() functions. Thus, the table or rule object is based on the definition of the data structure itself. This claimed feature of the invention is not disclosed, nor remotely suggested in the Adusumilli patent.

In accordance with features of the invention, only Applicants teach that the identifier structure is based on the definition of the data structure itself, so that the problem of duplicating the data structure definition is eliminated. This feature of the invention is not disclosed, nor remotely suggested in the Adusumilli patent.

This differs from treating the data structure purely as a string of bytes in that the offsetof() function provides the location of each parameter within the structure whereas a purely string implementation would only deal with the length of each parameter. Additionally, the sizeof() and offsetof() functions automatically account for compiler and platform differences which otherwise would lead to alignment problems. Since the sizeof() and offsetof() functions execute at compile time, no performance penalty results.

Applicants acknowledge that the sizeof() and offsetof() functions are built into the C and C++ programming language. Applicants acknowledge that sizeof and offsetof functions are known in the art, such as disclosed by Adusumilli. The Examiner quotes Adusumilli: "The CStructureSize field contains the size of the C structure..." however, the Examiner fails to refer to any teaching or suggestion in Adusumilli for defining a length and a location of each parameter of a data structure. Applicants respectfully

submit that there is no teaching or suggestion in Adusumilli for defining a length and a location of each parameter of a data structure, as taught and claimed by Applicants.

Further the Examiner fails to identify any teaching or suggestion in Adusumilli that provides for storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures, as taught and claimed by Applicants.

Applicants respectfully submit that Adusumilli does not enable, nor provide any suggestion of parsing and generating data structures by utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures, as taught and claimed by Applicants.

Adusumilli teaches a method for generating translation tables includes the steps of parsing the input configuration file and building the MOClassTable and ClassAttributeTable using the CLASS specifications in the configuration file, building the GlobalAttributeTable using the ATTRIBUTE specifications in the configuration file, and building the ASN1TypeTable using the TYPE specifications in the configuration file, propagating the configuration information for not yet configured Managed Object Classes by copying the configuration information from their super classes, propagating the ASN.1 Type configuration to attributes that have complex syntax, but not yet configured, and generation of translation tables (MOClassTable, ClassAttributeTables, GlobalAttributeTable, and ASN1TypeTable) containing this information in a form

convenient for usage by the translator library module. Contrary to the Examiner's assertion, the use of the sizeof() operator and the offsetof() of Adusumilli is not equivalent to and does not suggest, defining a length and a location of each parameter of a data structure as taught and claimed by Applicants. Contrary to the Examiner's assertion, the use of the sizeof() operator and the offsetof() of Adusumilli is not equivalent to and does not suggest, storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

Thus, an independent claim 1 is patentable.

Independent claim 10 is patentable

Each of the independent claim 10 and dependent claims 11, 13, and 13 is submitted to be patentable for the same reasons set forth above in connection with claim 1. Independent claim 10 recites a compiler and platform independent framework for parsing and generating data structures used by data processing applications in a computer system comprising: means for defining a length and a location of each parameter of a data structure utilizing sizeof and offsetof functions; and means for storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

The recited means for storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures is not shown, nor suggested,

by Adusumilli relied upon by the Examiner. Further a combination of all the teachings of the references of record would not achieve the claimed invention as recited by claim 10.

Adusumilli does not suggest any means for storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures. For a claim of a patent to be "anticipated" each and every element of that claim must be disclosed in a single prior art reference. Independent claim 10 is not anticipated by Adusumilli.

Thus, independent claim 10 is patentable.

Independent claim 14 is patentable

Independent claim 14 is submitted to be patentable for the same reasons set forth above in connection with claim 1. Independent claim 14 recites a computer program product for parsing and generating data structures for use by data processing applications in a computer system, said computer system having a processor; a memory controller coupled to said processor by a system bus; a main memory coupled to said memory controller; said computer program product including a plurality of computer executable instructions stored on a computer readable medium, wherein said instructions, when executed by said computer system, cause said computer system to perform the steps of: utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

The recited instructions of the computer program product of the invention, when executed by said computer system, cause said computer system to perform the steps of: utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures is not shown, nor suggested, by Adusumilli. Also a combination of all the teachings of the references of record would not achieve the claimed invention as recited by claim 14.

Contrary to the Examiner's assertions, the configuration program 7 of Adusumilli that creates an initial configuration file 6, propagates user's configuration to all relevant constructs and creates translation tables 3 and C data structures according to input configuration information, is not equivalent to the computer program product, as taught by Applicants and claimed in independent claim 14.

Applicants respectfully submit that the computer program product, as taught by Applicants and claimed in independent claim 14 is not disclosed, nor suggested by Adusumilli. Adusumilli does not disclose, nor suggest the steps of a utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures, as taught by Applicants and claimed in independent claim 14.

Lack of novelty can be established only where a prior invention is identical

to (or "anticipates") the invention sought to be patented. "In addition, the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public." Akzo N.V. v. U.S. Intern. Trade Com'n, 808 F.2d 1471, 1479 (Fed. Cir. 1986).

Thus, independent claim 14 clearly is patentable over Adusumilli. Independent claim 14 is patentable.

Thus, independent claims 1, 10, and 14 are not anticipated by, nor rendered obvious by the Adusumilli patent. Sasagawa et al. fails to disclose and provides no suggestion of storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition, as taught by Applicants and recited in the independent claims 1, 10, and 14. Sasagawa et al. adds nothing to render obvious the claimed invention, as recited by independent claims 1, 10, and 14, as presented.

D. THE REJECTION OF CLAIMS 2-9 AS BEING UNPATENTABLE OVER  
ADUSUMILLI AND SASAGAWA et al. SHOULD BE REVERSED

The Board should reverse the rejection of claims 2-9 under 35 USC §103 as being unpatentable over over Adusumilli, U.S. patent 5,870,749 in view of Sasagawa et al., U.S. patent 6,028,863.

35 U.S.C. §103 requires that the invention as claimed be considered "as a whole" when considering whether the invention would have been obvious when it was made. Graham v. John Deere, 383 U.S. 1, 148 USPQ 459, 472 (1966). It is applicants' claimed invention which must be considered as a whole pursuant to 35 U.S.C. §103,

and failure to consider the claimed invention as a whole is an error of law. In order for there to be a prima facie showing of obviousness under 35 U.S.C. §103, it is necessary that the references being combined in an attempt to demonstrate prima facie obviousness must themselves suggest the proposed combination. For a combination of prior art references to render an invention obvious, “[t]here must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination.” In re Oetiker, 977 F.2d 1443, 1447, 24 USPQ2D 1443, 1446 (Fed. Cir. 1992). That one must point to some reason, suggestion, or motivation to make a combination is not to say that the teaching must be explicit, but in order to render an invention obvious by the combination of prior art references, the prior art must contain some reason, suggestion, or motivation. It is impermissible to use the inventor’s disclosure as a “road map” for selecting and combining prior art disclosures. In Interconnect Planning Corp. v. Feil 774 F.2d 1132, 1143, 227 USPQ 542, 551 (Fed. Cir. 1985), the Federal Circuit noted that “The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time.”

The prior art of record, including the Adusumilli patent and the Sasagawa et al. patent provides no teaching, suggestion or inference in the prior art as a whole or knowledge generally available to one having ordinary skill in the art to achieve the claimed invention. 35 U.S.C. § 103 requires that the invention as claimed be considered “as a whole” when considering whether the invention would have been obvious when it was made. Graham v. John Deere, 383 U.S. 1, 148 USPQ 459, 472

(1966). It is applicant's claimed invention which must be considered as a whole pursuant to 35 U.S.C. § 103, and failure to consider the claimed invention as a whole is an error of law.

In the words of the Court of Appeals for the Federal Circuit, "The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." In re John R. Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780 (Fed. Cir. 1992). See In re Gordon and Sutherland, 733 F.2d 900, 221 USPQ 1125, 1127 (Fed. Cir. 1984), Carl Schenck, A.G. v. Nortron Corp., 713 F.2d 782, 787, 218 USPQ 698, 702 (Fed. Cir. 1983), and In re Sernaker, 702 F.2d 989, 995-96, 217 USPQ 1, 6-7 (Fed. Cir. 1983).

**Representative claim 2 is patentable**

Each of the dependent claims 2 and 3 is patentable for the same reasons discussed above relative to claim 1. Representative claim 2 is submitted to be separately patentable.

Each of the dependent claims 2 and 3 is patentable for the same reasons discussed above relative to claim 1. Representative claim 2 is submitted to be separately patentable because claim 2 further defines that the data structure is an ATM information element (IE) and wherein the step of utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure includes the step of utilizing sizeof and offsetof functions, defining a length and a location of each data parameter of said ATM information element (IE).

Applicant respectfully submits that the prior art descriptions of Adusumilli and the Sasagawa et al. fall short of applicant's invention, and the subject matter of the claimed invention as recited in claim 2 would not have been obvious to one of ordinary skill in the art in view of the references of record. Further in the cited references, there is no hint of defining a length and a location of each data parameter of said ATM information element (IE), as taught and claimed by Applicants. A combination of all the teachings of the references of record would not achieve the claimed invention as recited by claim 2.

In order for there to be a prima facie showing of obviousness under 35 U.S.C. §103, it is necessary that the references being combined in an attempt to demonstrate prima facie obviousness must themselves suggest the proposed combination. It is insufficient to establish obviousness that the separate elements of the invention existed in the prior art, absent some teaching or suggestion, in the prior art, to combine the elements. Arkie Lures, Inc. v. Gene Larew Tackle, Inc., 119 F.3d 953, 957, 43 USPQ2d 1294, 1297 (Fed. Cir. 1997).

The motivation, suggestion or teaching may come explicitly from statements in the prior art, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). Hindsight is impermissible when an examiner rejects an application in reliance upon teachings not drawn from any prior art disclosure, but from the applicant's own disclosure. In re Dembiczak, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999). Broad conclusory statements standing

alone are not "evidence." Id.

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991). The mere fact that the prior art could be modified so as to result in the combination defined by the claims would not have made the modification obvious unless the prior art suggests the desirability of the modification. See In re Gordon and Sutherland, 733 F.2d 900, 221 USPQ 1125, 1127 (Fed. Cir. 1984), Carl Schenck, A.G. v. Nortron Corp., 713 F.2d 782, 787, 218 USPQ 698, 702 (Fed. Cir. 1983), and In re Sernaker, 702 F.2d 989, 995-96, 217 USPQ 1, 6-7 (Fed. Cir. 1983).

In a proper obviousness determination, "whether the changes from the prior art are 'minor', . . . the changes must be evaluated in terms of the whole invention,

including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the patentee's . . . device."

Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 935, 15 USPQ2d 1321, 1324 (Fed. Cir.), cert. denied, 498 U.S. 920, 111 S.Ct. 296, 112 L.Ed.2d 250 (1990). This includes what could be characterized as simple changes, as in In re Gordon and Sutherland, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1983) (Although a prior art device could have been turned upside down, that did not make the modification obvious unless the prior art fairly suggested the desirability of turning the device upside down.). In re Chu, 66 F.3d 292, 298, 36 USPQ2d 1089 (Fed. Cir. 1995).

In Re Fritch, 972 F.2d at 1266, 23 USPQ2d at 1780 (Fed. Cir. 1992), states: "[I]t is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. ... This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention."

Applicants acknowledges that the ATM information element is known, and that Sasagawa. Applicants submit that the subject matter of the claimed invention as recited in claim 2 would not have been obvious to one of ordinary skill in the art in view of the references of record. No hint is found in the references of record and the references of record do not suggest the step of defining a length and a location of each data parameter of said ATM information element (IE), as taught and claimed by Applicants in claim 2.

Each of the dependent claims 2 and 3 is patentable.

**Representative claim 5 is patentable**

Each of claims 5, 6, 8 and 9 is submitted to be patentable for the same reasons set forth above in connection with claim 1. Representative claim 5 is separately patentable further defining the invention of claims 1 and 3, reciting that the ATM information element (IE) is a Connection Identifier IE and further includes the step of utilizing sizeof and offsetof functions, defining a length and a location of a virtual path connection identifier (VPCI) parameter.

Rejections based on § 103 must rest on a factual basis with these facts being

interpreted without hindsight reconstruction of the invention from the prior art. The Examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968).

Utilizing sizeof and offsetof functions, defining a length and a location of a virtual path connection identifier (VPCI) parameter, as taught and claimed by Applicants in claim 5, is neither disclosed nor suggested by the references of record, including Adusumilli and the Sasagawa et al. The fact that the disclosed process of Adusumilli is described to support representation of Managed Object attribute data in a space-efficient manner or in a form suitable for efficient database access by CMIP as well as non-CMIP applications, adds nothing to suggest the invention as defined in claim 5.

Thus, each of claims 5, 6, 8 and 9 is further patentable over the references of record.

**Representative claim 7 is patentable**

Each of claims 4, and 7 is submitted to be patentable for the same reasons set forth above in connection with claim 1. Further representative claim 7 is separately patentable further defining the invention of claim 1 reciting that the step of storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition includes the steps of storing said length and said location of said preferred/exclusive parameter in a preferred/exclusive parameter identifier object in said data structure definition. Only applicants teach storing said

length and said location of each said parameter of the data structure within an identifier object in a data structure definition. Only applicants teach storing said length and said location of said preferred/exclusive parameter in a preferred/exclusive parameter identifier object in said data structure definition.

Applicants teach the subject matter of representative claim 7, where storing said length and said location of said preferred/exclusive parameter in a preferred/exclusive parameter identifier object in said data structure definition, for example, as illustrated in FIGS. 5 and 6.

The claimed feature is not shown nor suggested in total combination of the references of record, including Adusumilli and Sasagawa et al. Thus, each of claims 4, and 7 is further patentable over the references of record.

Hindsight is impermissible when an examiner rejects an application in reliance upon teachings not drawn from any prior art disclosure, but from the applicant's own disclosure. In re Demiski, 796 F.2d 236,443, 230 USPQ2d 313, 316 (Fed. Cir. 1986); W.L. Gore & Assocs. Inc. V. Garlock, Inc., 721 F.2d 1540, 1553, 220 USP1 303, 313 (Fed. Cir. 1984), cert. Denied, 469 U.S. 851 (1984).

That one must point to some reason, suggestion, or motivation to make a combination is not to say that the teaching must be explicit, but in order to render an invention obvious by the combination of prior art references, the prior art must contain some reason, suggestion, or motivation. It is impermissible to use the inventor's disclosure as a "road map" for selecting and combining prior art disclosures. In Interconnect Planning Corp. v. Feil 774 F.2d 1132, 1143, 227 USPQ 542, 551 (Fed. Cir.

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1985), the Federal Circuit noted that "The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time."

E. CONCLUSION

Claims 1-14 are patentable over all the references of record and are neither anticipated nor rendered obvious by the Adusumilli and Sasagawa et al. patents. Each of the claims 1-14 is patentable and the Examiner's rejections should be reversed.

It is respectfully requested that the final rejection be reversed.

Respectfully submitted,

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(8) CLAIMS APPENDIX

CLAIMS ON APPEAL

1. (previously presented) A computer-implemented method for parsing and generating data structures for use by data processing applications in a computer system comprising the steps of:

utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and

storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

2. (original) A method for parsing and generating data structures as recited in claim 1 wherein the data structure is an ATM information element (IE) and wherein the step of utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure includes the step of utilizing sizeof and offsetof functions, defining a length and a location of each data parameter of said ATM information element (IE).

3. (previously presented) A method for parsing and generating data structures as recited in claim 2 wherein said ATM information element (IE) is a Connection Identifier IE and wherein the step of utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure includes the step of utilizing sizeof and offsetof functions, defining a length and a location of each data parameter of said Connection Identifier IE.

4. (original) A method for parsing and generating data structures as recited in claim 3 includes the step of utilizing sizeof and offsetof functions, defining a length and a location of a preferred/exclusive parameter.

5. (original) A method for parsing and generating data structures as recited in claim 3 includes the step of utilizing sizeof and offsetof functions, defining a length and a location of a virtual path connection identifier (VPCI) parameter.

6. (original) A method for parsing and generating data structures as recited in claim 3 includes the step of utilizing sizeof and offsetof functions, defining a length and a location of a virtual channel identifier (VCI) parameter.

7. (original) A method for parsing and generating data structures as recited in claim 4 wherein the step of storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition includes the steps of storing said length and said location of said preferred/exclusive parameter in a preferred/exclusive parameter identifier object in said data structure definition.

8. (original) A method for parsing and generating data structures as recited in claim 5 wherein the step of storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition includes the steps of storing said length and said location of said virtual path connection identifier (VPCI) parameter in a VPCI parameter identifier object in said data structure definition.

9. (original) A method for parsing and generating data structures as recited in claim 6 wherein the step of storing said length and said location of each said parameter of the data structure within an identifier object in a data structure definition includes the

steps of storing said length and said location of said virtual channel identifier (VCI) parameter in a VCI parameter identifier object in said data structure definition.

10. (previously presented) A compiler and platform independent framework for parsing and generating data structures used by data processing applications in a computer system comprising:

means for defining a length and a location of each parameter of a data structure utilizing sizeof and offsetof functions; and

means for storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

11. (original) A compiler and platform independent framework for parsing and generating data structures as recited in claim 10 is used by procedural table-driven or object rules-driven methods for parsing and generating data structures.

12. (original) A compiler and platform independent framework for parsing and generating data structures as recited in claim 10 is used for parsing and generating of protocol data units (PDUs) in data communication messages.

13. (original) A compiler and platform independent framework for parsing and generating data structures as recited in claim 10 is used for parsing and generating of control code for writing and reading headers for data storage.

14. (previously presented) A computer program product for parsing and generating data structures for use by data processing applications in a computer system, said computer system having a processor; a memory controller coupled to said

processor by a system bus; a main memory coupled to said memory controller; said computer program product including a plurality of computer executable instructions stored on a computer readable medium, wherein said instructions, when executed by said computer system, cause said computer system to perform the steps of:

utilizing sizeof and offsetof functions, defining a length and a location of each parameter of a data structure; and

storing said defined length and said defined location of each said parameter of the data structure within an identifier object in a data structure definition used for parsing and generating data structures.

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(9) EVIDENCE APPENDIX

All evidence is already of record.

(10) RELATED PROCEEDINGS APPENDIX

None.